

Contribution ID: 385

Type: Poster

## Lambda 1405 from lattice QCD

Tuesday, 30 July 2024 17:15 (1 hour)

In this work we present ongoing work for the study of the two pole structure of the  $\Lambda$  (1405) baryon at the SU(3) point. We construct the interpolation operators from the direct product of the pseudo-scalar meson and baryon octets. In these combinations the singlet and octet representations of the SU(3) symmetry are attractive, so we choose the states belonging to this representation with the quantum numbers of the  $\Lambda$  (1405): S=-1 and I=0. Then, we aim to implement a distillation procedure to extract the discrete energy spectrum and, eventually, use it to extract the scattering amplitudes and obtain the location of the poles in the complex energy plane.

**Primary authors:** URBACH, Carsten (University of Bonn); YAN, Haobo (Peking University); SUAREZ SUCUNZA, Javier (University of Bonn- HISKP); LUU, Thomas (Forschungszentrum Jülich / University of Bonn)

**Presenter:** SUAREZ SUCUNZA, Javier (University of Bonn- HISKP) **Session Classification:** Poster session and reception

Track Classification: Structure of Hadrons and Nuclei